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FRANKLIN HERBERT MOSHER

Franklin Herbert Mosher, one of the Assistant Entomologists at the Gipsy Moth Laboratory at Melrose Highlands, Mass., died suddenly from an attack of pneumonia on April 18, 1925. He was born at Dartmouth, Mass., September 3, 1861, and was one of a large family. He lived on the home farm, and after attending the local schools completed the regular course at the State Normal School at Bridgewater, Mass. After teaching for several years he entered the service of the Gipsy Moth Committee of the Massachusetts Board of Agriculture in 1894, and was assigned to field work on the gipsy moth project.

He was a great lover of nature, was gifted with unusual powers of observation, and his services were soon utilized in making careful studies of the behavior of the gipsy moth in the field. He paid particular attention to the usefulness of birds in destroying this insect, and conducted many other experimental lines. When the State work was discontinued in 1900 he returned to his home farm, where he remained for a few years, with the exception of one season spent in insect control work on a large estate in the Hudson Valley, New York.

His interest in entomology and other phases of natural history increased during this time, and he was one of the first men to be employed when in 1905 the State resumed gipsy moth control work. He cared for the first shipments of European parasites of the gipsy moth that were brought to the United States, and assisted in the breeding and colonization of these species. In 1911 he was made an employe of the Bureau of Entomology, and since then has been engaged in experimental work at the Gipsy Moth Laboratory,

Mr. Mosher was of a modest and retiring disposition; he avoided publicity and deprecated superficial work or show of any kind. His publications were small in number, but his records were thorough and accurate and his advice and assistance were sought and utilized on many of the problems dealt with at the Laboratory. He was very careful and thorough at his work, always dependable, a staunch and loyal friend, devoted to his home and family and highly respected in the community in which he lived.-- A. F. B.

H. L. Blaisdell recently visited the gipsy moth eradication project in New Jersey. He reports that the spraying work is well under way and that the spray material used is spreading and adhering well on all foliage, including the conifers. The formula used is 1 gallon of fish oil and 25 pounds of arsenate of lead powder to 400 gallons of water.

Parasetigena segregata Rond., one of the European tachinid parasites of the gipsy moth, which was obtained from several parts of Europe last summer, hibernated successfully in the hibernating cages in the laboratory yard at Melrose Highlands. Seven strong colonies of adults, each containing over 1,000 fertilized females, have been liberated in the moth-infested area of New England this spring. One small colony of mated adults of Sturmia gilva Hartig, also a gipsy moth larval parasite, has been liberated this spring. These flies were obtained by collecting the cocoons of one of its hibernating hosts, Lophyrus pini L., in southern Poland early this spring. These cocoons were taken from Bremen, Germany, where the parasites were reared, and shipped to the Melrose Laboratory as puparia. The spring colonization of Anastatus bifasciatus Fonsc. is practically completed, nearly 2,500,000 parasites having been colonized.

The following entomologists visited the Gipsy Moth Laboratory in April and May of this year: Dr. A. D. Imms, of the Rothamsted Agricultural Experiment Station; Dr. C. T. Brues, of the Bussey Institute of Harvard University; Dr. J. Bequaert and Dr. S. B. Wolbock, of the Harvard Medical School; Loring D. Smith and J. L. King, of the Japanese Beetle Laboratory at Riverton, N. J.; L. H. Northley and George W. Barber, of the European Corn Borer Investigations at Arlington, Mass.; H. L. McIntyre, of the New York State Conservation Commission, and Carl Heinrich, of the Bureau of Entomology, Washington, D. C.

FOREST INSECT INVESTIGATIONS

F. C. Craighead, Entomologist, in Charge

Dr. Craighead spent the first week of May at Asheville, N. C., assisting in the work which is being inaugurated at that point in cooperation with the Appalachian Forest Experiment Station. Plans have been outlined involving a comprehensive study of the southern pine beetle and several species of *Ips*. R. A. St. George will be stationed here during the coming summer.

Several temporary appointments have been made for the present field season. L. W. Orr and W. K. Himebaugh are assisting Dr. S. A. Graham on his studies of the spruce budworm. J. A. Beal has been detailed to Amherst, Mass., to take up the entomological aspect of slash disposal in cooperation with the Northeastern Forest Experiment Station and the Division of Forest Pathology of the Bureau of Plant Industry. Donald DeLeon is assisting H. J. MacAloney on white pine weevil investigations at Petersham, Mass. A. E. MacAndrews will be stationed again at Asheville, N. C., to work on the southern pine beetle.

On May 5 and 6 J. C. Evenden and H. J. Rust, of the Coeur d'Alene, Idaho, field station, accompanied by Forest Supervisor Abbott and Deputy Supervisor Broadbent, made an examination of the Magpie Creek Bark-Beetle Project, Helena National Forest. Though the infestation has decreased in severity during the past year it was decided to institute control measures for the protection of the remaining timber. This work began May 11 and is under the direct management of the Forest Supervisor.

On May 4 a conference with the District Forester was held in Missoula, Mont., relative to the plans for the Bitterroot-Big Hole Basin Bark-Beetle control project. The survey of the East Fork of the Bitterroot started on May 11, and control work will begin about May 20. This work will be delayed considerably on account of the snow on the higher elevation. It is expected that in the Big Hole Basin it will not begin before June 1.

Work on the Independence Creek Bark-Beetle Project, Coeur d'Alene National Forest, will start on May 21, and be completed by June 1. Mr. Evenden, with the assistance of Mr. Rust, will be in charge of both the Montana and Idaho projects.

SOUTHERN FIELD-CROP INSECT INVESTIGATIONS

J. L. Webb, Associate Entomologist, Acting in Charge

Dr. R. D. Rands, of the Bureau of Plant Industry, was a visitor at the Sugarcane Insect Laboratory at New Orleans in May. Several field trips through sugar plantations were made with Mr. Holloway and Mr. Haley.

Early in May E. W. Laake, H. M. Brundrett, and W. E. Dove, all of the Dallas Station, maintained for the investigation of insects affecting the health of animals, and Dr. R. C. Roark, of the Bureau of Chemistry, began active field work on screwworms with Mr. Parman in the vicinity of Uvalde, Tex. Extensive field tests with various larvicides and fly repellents are being made, and will continue through the early summer months.

In the recent spring there has appeared throughout the Southwest an unprecedented outbreak of the sticktight flea, Echidnophaga gallinaceus Westw. The loss has been especially severe among young chicks, resulting in the scarcity of fryers on many markets. Egg production has also been severely cut, the reduction ranging from 5 to over 50 per cent. The total loss this spring is estimated at over \$1,000,000.

Dr. W. D. Hunter and B. R. Coad made a very interesting trip in May through the arid cotton-producing areas of the Southwest.

M. Brunson, L. F. Greer, A. L. Monroe, and H. E. Woodruff have recently been appointed Field Assistants in the cotton boll-weevil control work at Tallulah, La.

FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, Senior Entomologist, in Charge

Oliver I. Snapp, in charge of peach insect investigations at Fort Valley, Ga., states that a delegation of three representatives of the German Government, headed by Dr. Gustav Oldenburg, visited the peach insect laboratory on May 24 to observe the work under way, and to obtain information on peach culture, looking to the establishment of this industry in the lower Rhine section of Germany.

The second generation of the oriental peach moth is now appearing in the Georgia peach belt. In commercial orchards the insect has done practically no damage thus far this season. Infestations are confined mostly to home orchards and back-yard peach trees.

Peach growers are watching with considerable interest the experiments being conducted with the use of the airplane for dusting peach trees. Over 100,000 trees are being used in this work, and the results from cutting "drops," etc., are very encouraging. A quantity of fruit of several varieties will be cut at harvest to determine final results.

E. A. McGregor, in charge of citrus thrips investigations at Lindsay, Calif., writes that the entire enrollment in biological subjects of the Lindsay High School visited the laboratory in order to acquaint themselves with the work of the project. Two short talks were made to the students by Messrs. McGregor and Mason on the life history of the citrus thrips, and on the organization of the U. S. Department of Agriculture, as well as the work of the Bureau of Entomology, special stress being laid on the methods employed in the conduct of the local project. After the classes were shown the laboratory they were conducted to one of the experimental groves where the Bureau's 200-gallon spray rig was in operation. Both scales, thrips, and other pests, were pointed out to the students in the orange grove.

Dr. Alvah Peterson, Assistant Entomologist of the New Jersey Agricultural College and Experiment Station, has joined the Division of Fruit Insects. Just now he is giving special attention to the oriental peach moth, with headquarters at Riverton, N. J., and will act as group leader in peach and nut insect projects.

TRUCK-CROP INSECT INVESTIGATIONS

J. E. Graf, Entomologist, in Charge

J. E. Graf returned to Washington the first week of May from a trip during which he conferred with the following field men in charge of stations: N. F. Howard, Birmingham, Ala., B. L. Boyden, Tampa, Fla., K. L. Cockerham,

Biloxi, Miss., M. M. High, Gulfport, Miss., C. E. Smith, Baton Rouge, La., J. R. Douglass, Estancia, N. M., R. E. Campbell, Alhambra, Calif., Walter Carter, Toppenish, Wash., and Messrs. Dunavan and Lane, also of Toppenish, the last named being of the Cereal and Forage Division.

D. E. Fink, Riverton, N. J., recently visited Washington to consult officials regarding certain phases of his work at the Riverton laboratory.

M. M. High and O. T. Deen, Gulfport, Miss., recently made a scouting trip to Alabama, Mississippi, and Florida, to determine the distribution of the Australian tomato weevil. They found the weevil fairly well distributed in several counties of Alabama and Mississippi and in Escambia County, Fla.

Rodney Cecil, who was transferred from Birmingham, Ala., to Geneva, N. Y., to conduct insecticidal investigations on beans, is now engaged in outlining field experiments for these tests. To determine the action of arsenicals on bean foliage in the North and work out safe and effective control measures in advance of the beetle is very essential in order that we may be in position to make recommendations to the New York growers when the bean beetle reaches that State. These investigations will be conducted in cooperation with Prof. P. J. Parrott, of the Agricultural Experiment Station, Geneva, N. Y.

Walter Carter, Toppenish, Wash., recently made a trip to southern Idaho in connection with his investigations on the sugar-beet leafhopper.

The temporary appointments of O. T. Deen, Gulfport, Miss., and R. W. Haegeler, Toppenish, Wash., have been extended to complete the investigations already under way in which they were engaged.

E. W. Davis, a graduate of the Kansas Agricultural College, has been given a temporary appointment as Field Assistant, to assist J. E. Dudley, Jr., in investigations on the onion maggot.

M. P. Jones, a graduate of the Ohio State University, has been temporarily appointed as Field Assistant to conduct investigations on the Mexican bean beetle under the direction of Dr. DeLong, Columbus, Ohio.

CEREAL AND FORAGE INSECT INVESTIGATIONS

G. A. Dean, Senior Entomologist, in Charge

W. G. Bradley, formerly employed as an assistant at the Louisiana State Experiment Station, Baton Rouge, has accepted an appointment for duty in connection with the investigations of the parasites of the European corn borer at Arlington, Mass. Mr. Bradley expects to report for duty there about June 15.

C. N. Ainslie, in charge of the Sioux City, Iowa, laboratory, recently made an extensive trip into western North Dakota and eastern Montana to study the Hessian fly, grasshopper, and cutworm conditions.

J. R. Horton, in charge of the Wichita, Kans., field laboratory, has been cooperating with the State Extension Service of Oklahoma in an investigation of the grasshopper outbreak in the general vicinity of Lawton, Okla. He has arranged to carry on a series of control experiments in that locality.

C. H. Gable, in charge of the San Antonio field laboratory, left his station in the last week in May to undertake a survey for locating approximately the borders of an infestation of the southwestern corn borer, especially in eastern New Mexico. Little is known regarding the limits of the infestation, although serious injury from this insect has occurred there during the last few years.

STORED-PRODUCT INSECT INVESTIGATIONS

E. A. Back, Entomologist, in Charge

William D. Reed was appointed Assistant Entomologist May 15, 1925, and has been assigned to assist J. C. Hamlin in Dried Fruit Insect Investigations, with headquarters at Fresno, Calif. Mr. Reed comes to the Bureau well recommended by South Carolina authorities, with whom he came in touch as an Assistant Professor of Entomology at Clemson College. Upon his resignation the student body presented Mr. Reed with a silver loving cup as a token of their esteem and appreciation of his services in connection with the student activities. Mr. Reed has been engaged during the past two summers in graduate work at Cornell University and has had summer experience at the Experiment Stations at Tallulah and Mound, La.

Dr. R. T. Cotton spent May 2 in Biglerville, Pa., where a test of calcium cyanide as a fumigant of pests of flour was conducted in a bakery storehouse.

BEE CULTURE INVESTIGATIONS

James I. Hambleton, Apiculturist, in Charge

On May 9 J. I. Hambleton began work at the temporary field laboratory on the coast of Delaware to determine the effect of various weather factors upon the flight activities of the honeybee during a nectar flow. Miss Dorothy Black, Washington, D. C.; Mrs. Dorothy P. Cooper, Ocean View, Del., and W. Alderson Lynch, Ocean View, Del., are temporary helpers in this work.

E. L. Sechrist gave a talk on beekeeping before the Optimist Club of Washington on May 5.

A. P. Sturtevant spoke before the meeting of the Maryland Beekeepers' Association held at Forest Glen, Md., May 23, and with the assistance of Mr. Sechrist gave a demonstration of the treatment of a colony affected with American foulbrood.

George H. Rea, at one time employed by the Bureau of Entomology as Specialist in Beekeeping, has recently been appointed Extension Apiarist at Pennsylvania State College.

Prof. L. M. Bertholf, of Western Maryland College, together with his class in zoology, visited the Laboratory May 23.

TAXONOMIC INVESTIGATIONS

S. A. Rohwer, Entomologist, in Charge

In the Autumn of 1924 Dr. William Schaus learned from his friend and colleague Paul Dognin that the collection of Lepidoptera belonging to the latter would be offered for sale. Mr. Dognin formed this collection during his 40 years' active work as a lepidopterist, and it seemed to him advisable to arrange the final disposition of this valuable collection before the cessation of his opportunities to work. The collection contains about 90,000 specimens of Lepidoptera, of which 82,000 are spread, and includes types of 3,300 species known to occur in the New World. Mr. Dognin set for the collection the price of \$50,000, and out of friendship he gave Dr. Schaus an opportunity to purchase it, provided he could raise this amount before the end of March, 1925. Dr. Schaus immediately began an active canvas for the necessary money and by vigor and perseverance was successful. The Dognin Collection of Lepidoptera will be one of the finest recent additions to the rapidly growing collection of insects in the National Museum, and American entomologists should be deeply grateful to Dr. Schaus for his service in bringing it to America.

Dr. Schaus and his friend J. T. Barnes will sail for Europe early in June to arrange for the packing of the Dognin collection and its transportation to America. Dr. Schaus expects to study types of Lepidoptera in Berlin, then proceed to London, where he will compare material with the types in the British Museum. By way of preparation Dr. Schaus has picked out over 5,000 specimens of Oriental and African moths from the National Collection, which are being sent to the British Museum for this comparison. It is expected that the trip made by Dr. Schaus and Mr. Barnes will occupy about five months. Dr. Schaus will bear the expense of this trip, but during the time he is working in Europe he will be on pay status.

Dr. W. M. Mann resigned from the Bureau of Entomology on May 12, 1925, to become Superintendent of the National Zoological Park. Dr. Mann has long been interested in animals, and while on his various field trips has been able to collect a number of acceptable additions to the National Zoological Park. While the Bureau regretfully accepted Dr. Mann's resignation, his associates feel that he is well qualified to accept this new position, and extend their hearty good wishes. He will be continued as a collaborator of the Bureau of Entomology, and will do identification work on ants. As time permits he hopes to continue his taxonomic investigations on ants secured on his various trips, as well as on other ants which may be sent to the National Collection.

Dr. A. G. Böving, Entomologist, will leave for Denmark June 9 on the steamship Lituania. During his sojourn in Europe he will study the larvae of beetles in the collections of the Copenhagen Museum and the British Museum, and certain other collections. Dr. Böving will be accompanied by his wife and son, and expects to return August 14. While studying, he will be on extended annual leave.

R. C. Shannon, Junior Entomologist, will spend about two months in Europe this summer. While abroad he will study types of Diptera in the museums of Italy, France, and England, and while in England he will study mosquitoes with Dr. Edwards. During his stay in Europe he will also exchange American material for Old World forms. Mr. Shannon will be accompanied by his wife, and while in Italy will visit his sister. His annual leave will be extended so as to permit study in the museums mentioned above.

During the interval from May 10 to May 23 Carl Heinrich made a trip to New York, Massachusetts, Rhode Island, and Connecticut, to determine the present status of the introduced European pine shoot moth.

Dr. J. H. Gehring, of Bethel, Me., was in Washington in May and visited the Division of Insects to renew his acquaintance with Dr. Schwarz, with whom he walked across Florida in 1874. Since his retirement as head of a sanitarium for the treatment of nervous diseases, in Bethel, Dr. Gehring has become interested in the collection and study of beetles, particularly ground beetles. Under the guidance of H. S. Barber he did some collecting, and was fortunate enough to find some specimens in the group mentioned. While here, Dr. Gehring spoke at a meeting of the Entomological Society.

During the month of May Dr. Böving made many determinations of coleopterous larvae for students who are preparing theses for doctors' dissertations. He has determined about 50 coleopterous larvae for Miss Margaret Windsor, Urbana, Ill., to assist in her research problem on the hibernation of insects in the soil of woods.

Miss Bertha Lutz, daughter of Dr. Adolph Lutz, now with the Brazilian National Museum, recently spent a short time in the Division of Insects, becoming acquainted with the various specialists and arranging for exchanges of material.

LIBRARY

Mabel Colcord, Librarian

NEW BOOKS

Bernard, C., and Menzel, R.

Over *Dactylispa manteroi* Gestro, een bladboorder uit de familie der chrysomeliden, die op *Cinchona ledgeriana* voorkomt. Bandoeng, N. V. Boekh. Visser & Co., 1924. 6 pp., plate. Overdruk uit *Cinchona* I, No. 2.

Boas, J. E. V.

Dansk Forstzoologi. 2. forøgede udgave. København, etc., Glydendalske Boghandel, 1923. 761 pp., illus., 32 pls. "Litteratur": p. xxii.

Brun, Rudolf.

Das Leben der Ameisen. Berlin, Verlag u. druck B. G. Teubner, 1924. 211 pp., illus. (Teubner's Naturwissenschaftlichen bibliothek Bd. 31.)

Burkill, I. H.

Insect vision in connection with flower fertilization. Singapore Naturalist, No. 5, pp. 23-46, January, 1925.

Cheesman, Evelyn.

Everyday doings of insects. London, G. G. Harper & Co., Ltd., 1924. 245 pp., illus.

The great little insect. London, Hodder & Stoughton, Limited, 1924. 256 pp.

Clark, C. H.

Practical methods in microscopy. Ed. 5, rev. & enl. Boston, D. C. Heath & Company, 1925. 337 pp., illus.

Diptera recueil d'études biologiques et systematiques sur les diptères du globe réunies par Prof. Dr. M. Pezzi, E. Seguy. Paris, Paul Lechevalier, editeur, 1925. pp. 105-201. (Encyclopédie entomologique, Série B. Mémoires et notes II, t. 1, fasc. 3-4.)

Mader, Leopold.

Bestimmungstabellen der europäischen Coleopteren 94. hft. Coccinellidae, tribus Scymnini. Bearb. von Leopold Mader... Troppau, K. Skrobanek & sonne, 1924. 48 pp.

Navarro y Perez, Leandro.

Plagas de langosta. Calpe Apr. 1925? 62 pp., illus. (Catecismo del agricultor y del ganadero ser V. Patologia vegetal Num. 7 y 8.)

Prinz, J.

Beiträge zur biologie und bekämpfung der rebschadlinge und zur kunstlichen befruchtung der roben. Tiflis, Herausgeber: winzerverband "Konkordia," 1925. 116 pp. illus. At head of title: Entomologisches kabinett beim Winzerverband "Konkordia" in Helenendorf, Aserbaidshan.

Prosser, Joseph.

Geschichte der bienenzucht in Oesterreich und des Oesterr. reichsvereines für bienenzucht. (Zentralverein für bienenzucht in Oesterreich.) L... Wein, Hrsg. vom Oesterreichischen reichsverein für bienenzucht, 1915. 336 pp., illus.

Sharp, D. L.

The spirit of the hive... New York and London, Harper & Brothers, 1925.
240 pp.

Surcouf, J. M. R.

Les tabanides de France et des pays limitrophes. Paris, Paul Lechevalier,
1924. 261 pp., illus. (Encyclopédie entomologique ser. A., v. 5.)

Weed, C. M. and Dearborn, Ned.

Birds in their relations to man - a manual of economic ornithology for
the United States and Canada. Ed. 3, rev. Philadelphia and London,
J. B. Lippincott Company, 1924. 414 pp., illus. Apx. W. A partial
list of the economic relations of the North American birds, pp. 355-407.